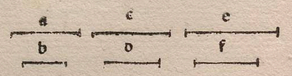
ea per que ꝓcessit in quinto ipsa demonstrare intendit: principia enim quinti propter maliciam quãtitatum incõicantium difficilia sunt: principia vero numerorũ magis vitro se intellectui appliçãt: faciliusq; q̃z illa. Egent eni illa intellectu magis dispositio.

Propositio .13.

SI fuerint quotlibet numeri ꝓportionales quantus erit vnus aſs ad ſuũ ꝙſequẽtẽ: tanti erũt oẽs antecedẽtes pariter accepti ad oẽs cõſequẽtes pariter acceptos.

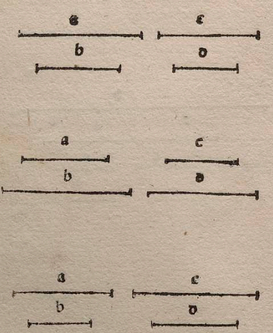
¶Qõ ꝓponit euclides p.13.quinti de quantitatib⁹ i genere ꝓponit p hanc de numeris: vt ſi ſint.a.b. ꝛ.c.d.ꝛ.e.f. ꝓportionales dico q q̃ é ꝓportio.a.ad.b.ea eſt q̃.a.c.e.pariter acceptoꝝ ad.b. d.f.pariter acceptos. Si enim.a.c.e.ſint minores.b.d.f.erit per cõuerſionẽ diffinitionis quota ps aut partes.a.b.tota vel tote.c.d.ꝛ.e.f. per.5.ergo vel per .6.quotiens oportuerit repetitas: erit quota pars vel partes.a.b.tota vel tote.a.c.e.pariter accepti. b.d.f. pariter acceptoꝝ: quare per diffinitionẽ ꝓportio vna. Si autem.a.c.e.ſint maiores b.d.f.erit per primam partem.11.quota pars vel partes.b.a.tota vel tote. d.c.ꝛ.f e.per.5.ergo vel.6.quotiens oportuerit repetitas: erit quota pars vel partes.b.a. tota vel tote.b.d.f.pariter accepti.a.c.e.pariter acceptorum.itaq; per ſcõam partem.11. proportio.a.ad.b.ſicut.a.c.e.pariter acceptorum ad.b .d.f. pariter acceptos: quod eſt propoſitum.



Propositio .14.

SI fuerint quatuor numeri ꝓportionales: permutatim quoq; ꝓportionales erunt.

¶Modũ arguẽdi qui dicitur proportionalitas permutata quã demonſtrauit euclides per.16.quinti in quãtitatibus in genere: ꝓponit hic demonſtrandũ i numeris: vt Si ſit ꝓportio.a.ad.b.ſicut.c.ad.d erit permutatim.a.ad.c.ſicut.b.ad.d. erit eni.a.maior.b.aut minor: ſit' quoq; et maior.c.aut minor. Sit itaq; primo minor vtroq; :erit ergo p preſentem ypothe.et conuerſionem diffinitionis.a.tota pars aut partes.b.quota vel quote.c.d.per.9. itaq; vel.10.erit pmutatim.a.tota pars aut ptes.c.quota vel quote.b.d.quare per diffinitionẽ proportio vna. Sit igitur.a.maior vtroq; :eritq; per primam partem 11.vt quota pars aut partes eſt.b.a.tota vel tote ſit.d.c. quare per.9. vel.10.tota pars aut ptes erit.b.d.quota vel quote.c.a.igitur per ſcõam partẽ.11.erit.a.ad.c. ſicut.b.ad.d.Sit tertio.a. maior.b.ꝛ minor.c.eritq; p primã ptẽ.11.tota pars aut ptes.b.a.quota vel quote.d.c.quare per.9.vel.10.quota vel quote eſt.a.c. tota vel tote erit.b.d.per diffinitionẽ itaq; ꝓportio vna: Vltimo quoq; ſit.a.maior.b. maiorq;.c.eritq; vt tota pars aut partes ſit.c.d.quota vel quote eſt.a.b. per.9. itaq; vel. 10.erit tota vel tote.d.b.quota vel quote.c.a. quare per ſecundã partem.11.b ad.d.ſicut.a.ad.c.ſicq; conſtat propoſitum: huic autẽ cedũt.9.vel.10 .q̃ hec ſola qõ ambe ille proponit.

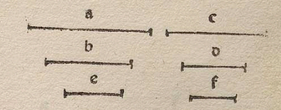


Propositio .15.

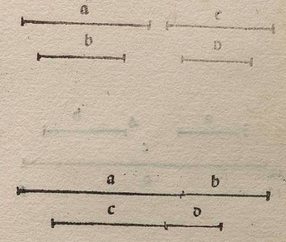
SI fuerint quotlibet numeri alijq; ſcõm eorum numerum omneſq; duo ex prioribus ſcõm proportionem omnium duorũ ex poſterioribus: in proportione equalitatis proportionales erunt.

¶Modũ arguendi qui dicit' equa ꝓportionalitas quã demonſtrauit euclides p.22.quinti de quãtitatib⁹ in genere ꝓponit hic demõſtrãdũ in numeris

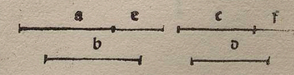
directe ꝓportiõalitatis: equã aũt ꝓportiõalitatẽ quã demõſtrauit per.23.quinti: ꝛ e quãtitatibus indirecte ꝓportionalitatis non ꝓponit demõſtrãdũ i numeris: ſed cã demõſtrabum⁹ infra ſup.19.huius. Nec eſt neceſſariũ ut p̃demõſtremus i numeris qõ demõſtratũ é p.11. quinti de quãtitatib⁹ i genere videlz ſi quotlibz ꝓportiões i numerisfuerint vni eq̃les vel eedẽ ipſas eẽ ſibi eq̃les vel eaſdẽ .hoc eni manifeſtũ é per diffinitionẽ ut ſi.a.ad.c.ꝛ.e.ad.f.ſit ſicut.b.ad.d.erit tam.a.c.q̃z.e.f. tota ps aut partes.quota vel quote.b.d.aut totiens continebit.a.c.ꝛ.e.f.quotiens.b.d.ꝛ tota pars aut partes ſuperfluent.c.in.a.ꝛ.f.in.e.quota vel quote. d.in.b. q; ergo quota pars aut ptes é.a.c.tota vel tote eſt.e.f.aut quotiens.a.continet. c.totiens e.f.ꝛ quota pars aut partes.c.ſuperfluunt.in.a.tota vel tote.f.in.e.erit per diffinitionẽ.a.ad.c.ſicut.e.ad.f.Sint igitur ut ꝓponitur numeri.a.b.c. ꝛ alij totidem c.d.f.ſitq;.a.ad.b.ſicut.c.ad.d.ꝛ.b.ad.e.ſicut.d.ad.f.dico q; erit in equa ꝓportionalitate.a.ad.e.ſicut.c.ad.f.erit eni per premiſſam.a.ad.c.ſicut.b.ad.d. ſed ꝛ b.ad.d.ſicut.e.ad.f.quare.a.ad.c.ſicut.e.ad.f.igit' per eandẽ.a.ad.e.ſicut.c.ad.f idẽ erit ſumptis plurib⁹: ſicq; cõſtat ꝓpoſitũ. ¶Qm̃ aũt euclides ceteras quatuor ſpecies ꝓportiõalitatis que ſunt conuerſa: coniũcta: diſiuncta: cuerſa :non ꝓponit demonſtrandas in numeris: cõueniẽs arbitramur eas quas auctor tanq̃z facile demonſtrabiles pterniſit demonſtrare: Primũ itaq; demonſtrabimus conuerſã: vt ſi ſit.a.ad.b.ſicut.c.ad.d.dico q; erit ecõuerſo.b.ad.a.ſicut.d.ad.c.ſi eni fuerit.a minor.b.tunc quoq; erit.c.minor.d.ꝛ tota pars aut partes. a.b .quota vel quote c.d.quare per ſcõam ptem.11.erit.b.ad.a.ſicut.d.ad.c.ſi autem fuerit.a.maior.b. erit quoq; ꝛ.c.maior.d.ꝛ per primam partem.11.b.tota pars aut partes.a.quota vel quote.d.c.per diffinitionem igitur.b.ad.a.ſicut.d.ad.c.



¶Diſiunctam proportionalitatem oſtendere. ¶Vt ſi ſit.a.b.ad. b.ſicut.c.d.ad.d.erit.a.ad.b.ſicut.c.ad.d.erit enim permutatim.a.b.ad.c.d.ſicut.b. ad.d.ꝛ p.12.ſicut.a.ad.c.q; ergo.a.ad.c.ſicut.b.ad.d.erit pmutati.a. ad.b. ſicut c.ad.d.



¶Coniuncte proportionalitati demonſtrationem afferre ¶Vt ſi ſit.a.ad.b.ſicut.c.ad.d.erit.a.b.ad.b.ſicut.c.d.ad.d. erit eni pmutatim a.ad.c.ſicut.b.ad.d.quare p.13..a.b.ad.c.d.ſicut.b.ad.d.pmutatim igitur erit.a b.ad.b.ſicut.c.d.ad.d. ¶Euerſam proportionalitatem reſtat in numeris ſtabilire. ¶Vt ſi ſit.a.b.ad.b.ſicut.c.d.ad.d.erit.a.b.ad.a.ſicut.c.d.ad c.erit eni pmutatim.a.b.ad.c.d.ſicut.b.ad.d.q̃re p.12.ſicut.a.ad.c. permutatim igitur erit.a.b.ad.a.ſicut.c.d.ad.c.patet itaq; totum. Ex his quoq; leue é demonſtrare i numeris q; euclides ꝓponit p penu'ſ.quiti de quãtitatib⁹ i genere videlz q; ¶Si proportio primi ad ſcõm fuerit ſicut tertij ad q̃rtũ quinti quoq; ad ſecundum ſicut ſexti ad quartum: erit proportio primi ꝛ quinti pariter acceptorum ad ſecundum ſicut tertij ꝛ ſexti ad quartum.



¶Vt ſi ſit.a.ad.b.ſicut.c.ad.d.itemq;.e. ad.b.ſicut.f.ad.d.erunt.a.ꝛ.e. pariter accepti ad.b.ſicut.c.ad.f.pariter accepti ad.d.erit enim per conuerſam proportionalitatem.b.ad.e.ſicut.d.ad.f.quare per equam proportionalitatem.a.ad.e.ſicut c.ad.f.ergo coniunctim.a.ꝛ.e.ad.e.ſicut.c.ꝛ.f.ad.f itaq; per equã proportionalitatem.a.ꝛ.c.ad.b.ſicut.c.ꝛ.f.ad.d.quod eſt propoſitum. Eodemq; modo probabis ecõuerſo .ſi ſit.b.ad.a.ſicut.d.ad.c.itẽq;.b.ad.e.ſicut.d.ad.f.erit.b. ad.a. ꝛ.e.ſicut.d.ad.c.ꝛ.f.erit enim per conuerſam proportionalitatẽ. a.ad.b. ſicut.c. ad.d.quare per equam.a.ad.e.ſicut.c.ad.f.ꝛ coniunctim.a.ꝛ.e.ad.e.ſicut. c.ꝛ.f.

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